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10/803,901	03/19/2004	Hinnerk Kaiser	P24834	6700

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RESTON, VA 20191

EXAMINER
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MAKI, STEVEN D

ART UNIT	PAPER NUMBER
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1733

DATE MAILED: 11/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/803,901

Applicant(s)

KAISER ET AL.

Examiner

Steven D. Maki

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1733

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☒ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>071304</u> . | 6) <input type="checkbox"/> Other: ____.  |

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- 1) The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

- 2) Claims 1-22, 24 and 29 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

As to claims 1, 3, 24 and 29, the subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention is the specified ratio  $Y/X$  of "between approximately  $1 - (D_R - 100) \times 1.5$  and approximately  $1 - (D_R - 100) \times 5$ " (claim 1, claim 24, claim 29); and the specified ratio  $Y/X$  of "approximately  $1 - (D_R - 100) \times 3.3$ " (claim 3).

The formula for the ratio  $Y/X$  is found in abstract, the claims and the specification. See lines 10-11 of the abstract, claims 1, 3, 24 and 29 and paragraphs 8, 1, 20, 30 and 32 of the specification.

Claims 1, 3, 24 and 29 describe the width  $Y$  as at least partially encompassing the two shoulder block rows and the width  $X$  as being generally defined by axial outer edges of the pair of center block rows.

As examples of  $D_R$ , the specification mentions 14 inches, 15 inches, 16 inches and 17 inches. When  $D_R = 15$  inches, the specified ratio  $Y/X$  is between approximately  $1 - (15 - 100) \times 1.5$  to approximately  $1 - (15 - 100) \times 5$ , which is the same as the ratio  $Y/X =$  approximately 128.5 to 426.

The original disclosure describes an example tire dimension of 195/65R15 (paragraph 41). The tire dimension 195/65R15 is for profile 1b in figure 2. A tire size of 195/65R15 means that the tire section width is 195 mm.

Even if the tread has a width equal to the tire section width (the width  $Y =$  the tire section width), then  $X$  can be 1.52 mm ( $195 \text{ mm} / X = 128.5$ ) when  $D_R = 15$  inches and section width = 195 mm. One of ordinary skill in the art would readily recognize description of the center profile width  $X$  for two block rows of a tire having a size of 195/65R15 being only 1.52 mm as being an error. Furthermore, the specification does not describe the units to be used for the formulas in the expression "between approximately  $1 - (D_R - 100) \times 1.5$  and approximately  $1 - (D_R - 100) \times 5$ ". Should the units in the formula be inches as assumed in the above examiner's example? If inches is used in the formulas, the resulting ratio is relatively extremely small and conflicts with the ratio  $Y/X$  indicated in figure 2. Accordingly, the claimed invention defined using the specified ratio  $Y/X$  is not adequately described and enabled.

3) Claim 3 is objected to because of the following informalities: "ration" should be --ratio--. Appropriate correction is required.

4) The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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5) Claims 1-20, 24 and 29 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As to claims 1, 3, 24 and 29, it is unclear what units (inches?) are required to be used for  $D_R$  in the formula, and as such, the scope of the claimed ratio is unclear.

As to claims 19-21, it is unclear if (1) each of the first and second angles are defined by an angle of 5-15 degrees or (2) the difference between the first and second angles is 5-15 degrees. In view of paragraph 16 of the original disclosure, it appears that the latter is intended.

6) Claim 21 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

Claim 21 (angle is "equal to or less than approximately 10 degrees" broadens the range (between 5 degrees and approximately 15 degrees), or in other words, removes the requirement of a lower limit of approximately 5 degrees.

7) Applicant is advised that should claim 10 be found allowable, claim 11 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim.

See MPEP § 706.03(k).

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Claims 10 and 11 have the same scope - both require the sinusoidal limitation.

8) The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9) The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Rohweder et al

10) **Claims 1-9, 14 and 19-24 are rejected under 35 U.S.C. 102(b) as being anticipated by Rohweder et al (US 6105643).**

Rohweder et al discloses a radial pneumatic light truck or automobile for use off road and in heavy snow having a tread comprising shoulder rows of traction elements 42, center rows of traction elements 42, sipes 47, right and left circumferential grooves 54, 55, center circumferential groove 56 and diagonal grooves 57, 58. The sipes in each block row are "generally parallel" with each other. The tread has road contacting width A, road contacting width B and road contacting width C. The tire has a size of for example P235/75R15 with the center zone having a width A of 40% tread width. One of ordinary skill in the art would readily understand that the tire tread comprises rubber.

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See col. 1 lines 14-21, col. 2 lines 2-3, 14-16, col. 4 line 14, 22-23, 35, col. 5 lines 16-17, 30.

As to claim 1, the claimed tire is anticipated by Rohweder et al's tire. The claimed "fine indents" read on the sipes 47. The claimed shoulder block rows read on rows 2, 5. Since Rohweder et al describes widths B,C as being a road contacting width, Rohweder et al defines a road contacting width Y as claimed. The claimed center width X corresponds to road contacting width A in Rohweder et al.

*With respect to the "claimed ratio", Rohweder et al teaches an example tire having a rim diameter of 15 inches and a center profile width A of 40% tread width TW, which comprises road contacting zones B, A, C. In other words, Rohweder et al teaches a ratio of 0.40 for a 15 inch rim.*

As to claim 2, Rohweder's tire can be used in heavy snow.

As to claims 4-6, Rohweder et al teaches 15 inches.

As to claims 7-9, the claimed "one of a stepped configuration and a saw-toothed configuration" reads on Rohweder et al's illustrated sipe configuration.

As to claim 14, see center circumferential groove 56.

As to claims 19-21, Rohweder et al's sipes 47 are inclined with respect to the circumferential direction by about the same angle.

Claim 22 does not require the diagonal grooves on both side of the EP to be swept back in the same direction such that shoulder diagonal grooves on one side of the EP are inclined in the opposite direction as that of diagonal grooves on the other side of the EP.

Japan 103

**11) Claims 1-3, 14, 17, 19 and 21-30 are rejected under 35 U.S.C. 102(b) as being anticipated by Japan 103 (JP 1-195103).**

See abstract and figure 1.

*With respect to the "claimed ratio",* see the illustrated width of the footprint (ground contact area) and the illustrated width of the center area, which is located between circumferential grooves 11A, 11B and comprises center block rows.

Graas et al

**12) Claims 1-3, 7-8, 14 and 22-30 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Graas et al (US 5198047).**

Graas et al discloses a winter tire having a tread comprising three circumferential grooves, four rows of blocks, diagonal grooves and sipes. See figure 3. The central area has a width of  $RW2 + RW3$  wherein  $RW2$ ,  $RW3$  may each be equal to 20-25%. See col. 3 lines 8-16. The tire may have a size such as 175/70R13,  $RW2 = 29$  mm and a ground contacting tread width of 130 mm. See col. 5 lines 65-68. In this example,  $RW2 = 22.3\%$  of the ground contacting tread width  $TW$ . The center area therefore has a width of 44.6% of the ground contacting width. Hence, Graas discloses an example tire for a 13 inch diameter rim having a central area width of 44.6% of the ground contacting tread width. Graas teaches that the tread portion of a pneumatic tire generally comprises a plurality of grooves defining ground engaging rubber elements.

*With respect to the claimed ratio,* Graas teaches using a ratio of 0.446 for a



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13 inch rim.

One of ordinary skill in the art would understand from this disclosure that Graas et al's tread has a "tread rubber profile". In any event: it would have been obvious to one of ordinary skill in the art to form Graas et al's pneumatic tire such that the tread is made of rubber and thereby defines a "tread rubber profile" since it is taken as well known / conventional in the tire tread art to form a pneumatic tire having a tread made of rubber.

As to claim 2, Graas et al's tire is winter tire.

As to claim 3, the "claimed ratio" would have been obvious in view of Graas et al's suggestion to use a center profile having a width of  $RW2+RW3$  where  $RW2$ ,  $RW3$  equal about 20-25%, or in other words, a center profile having a width of 40-50%.

As to claims 7 and 8, note shape of sipes in figure 3.

As to claim 14, note center circumferential groove 5.

As to claim 22, the tread is directional.

As to claims 23-24, note center circumferential groove 5.

As to claims 25-30, Graas et al's shoulder blocks are wider than the center blocks and the center groove is illustrated as having an average width less than the outer circumferential grooves 4, 6.

**13) Claims 4-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Graas et al as applied above and further in view of Colombo et al (WO 02/068222).**

As to claims 4, 5 and 6, it would have been obvious to form Graas et al's tire such that the tire fits a 15 inch rim since (1) Graas et al's tire is a pneumatic radial tire

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having a block tread pattern for use in the winter and (2) Colombo et al suggests using a tire size such as 195/65R15 (tire for 15 inch rim) for a pneumatic radial tire having a block pattern, which like that of Graas et al may be directional tire tread for use in the winter. See page 8 lines 1-4 of Colombo et al.

**14) Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Graas et al as applied above and further in view of Europe 577 (EP 846577).**

As to claim 13, it would have been obvious to one of ordinary skill in the art to provide the shoulder sipes (fine indents) with a narrower width than the width of the center sipes (center fine indents) since Europe 577, also directed to a winter tire, suggests providing incisions (sipes / fine indents) in shoulder regions with a smaller width than the incisions (sipes / fine indents) in the central region to reduce softening in the shoulder regions and thereby equalize wear and improve ground adhesion.

**15) Claims 15-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Graas et al as applied above and further in view of Japan 024 (JP 5-319024).**

As to claims 15-16, it would have been obvious to provide Graas et al's center groove with the claimed width in view of Graas et al's teaching to use lateral grooves having a width of about 4-9 mm for the winter tire and Japan 024's suggestion to provide a center circumferential groove with a width of 125-250% of the width of the cross direction grooves to raise snow performance of a pneumatic tire.

Colombo et al

**16) Claims 1-6, 14, 18-19, 22-30 are rejected under 35 U.S.C. 102(a, b) as being anticipated by Colombo et al.**

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Colombo et al discloses a pneumatic radial winter tire having three circumferential grooves 15, 16, 17, diagonal grooves 22, 23, two shoulder block rows, two center block rows, and sipes 40, 41 ("fine indents"). See figure 2. The ratio  $L_c/W$  is less than 0.45. Colombo et al's pneumatic radial winter tire having a size such as 195/65R15 inherently has a rubber tread.

**17) Claims 1-6, 14 and 17-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Colombo et al and optionally in view of Graas et al.**

Colombo et al is considered to anticipate claim 1. In any event: it would have been obvious to one of ordinary skill in the art to provide the width of the center block rows of Colombo et al's pneumatic winter tire for a rim such as 15 inches such that the claimed ratio is satisfied in view of (1) Colombo et al's teaching to provide the two center block rows of a winter tire with a width  $L_c$  being less than 45% of the width  $W$  and optionally (2) Graas et al's suggestion to provide the center area comprising two center block rows of a winter tire with a width of 40-50% of the ground contacting tread width.

As to rubber tread, Colombo et al's pneumatic radial winter tire has a size such as 195/65R15. In any event: it would have been obvious to one of ordinary skill in the art to form Colombo et al's pneumatic tire such that the tread is made of rubber and thereby defines a "tread rubber profile" since it is taken as well known / conventional in the tire tread art to form a pneumatic tire having a tread made of rubber.

As to claim 2, Colombo et al's tire is a winter tire.

As to claims 4-6, Colombo et al teaches a tire having a size such as 195/65R15 (tire for a 15 inch rim).

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As to claim 14, note center circumferential groove 15.

As to claims 17-21, it would have been obvious to orient Colombo et al's sipes (fine indents) as set forth in claims 17-21 since Colombo et al teaches orienting the center sipes at an angle of 0-30 degrees with respect to the axial direction (60-90 degrees with respect to the circumferential direction) and orienting the shoulder sipes at an angle of 0-45 degrees with respect to the axial direction (45-90 degrees with respect to the circumferential direction).

As to claim 22, Colombo et al's tread can be directional.

As to claims 23-24, note center circumferential groove 15.

As to claims 25-30, it would have been obvious to one of ordinary skill in the art to provide Colombo et al's grooves such that the center circumferential groove 15 is narrower than the left, right circumferential grooves 16, 17 (claim 25) / the transverse grooves (diagonal grooves) have a width less than either of the center circumferential groove and the left and right circumferential grooves (claim 26) since Colombo et al teaches providing the *center circumferential groove* with a width of 4 mm to 6 mm, providing the *left, right circumferential grooves* with a width of 4 mm to 8 mm and providing the *transverse grooves* with a width of 2 mm to 5 mm (page 9).

**18) Claims 7-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Colombo et al and optionally in view of Graas et al as applied above and further in view of Europe 600 (EP 775600).**

As to claims 7-9, it would have been obvious to one of ordinary skill in the art to provide Colombo et al's center sipes with one of a stepped configuration and a saw-

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toothed configuration since Europe 600 suggests using a saw toothed configuration for incisions (sipes / fine indents) in a tread of a winter tire to improve brake behavior.

**19) Claims 10-12 and 17-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Colombo et al and optionally in view of Graas et al as applied above and further in view of German 156 (DE 19705156).**

As to claims 7-12, it would have been obvious to one of ordinary skill in the art to provide Colombo et al's shoulder sipes with a sinusoidal configuration as claimed since German 156, also directed to a winter tire having a directional tread comprising shoulder blocks and center blocks, suggests providing the fine cuts (sipes / indents) in the blocks with a wavy configuration (page 2 of machine translation).

As to claims 17-21, it would have been obvious to orient Colombo et al's sipes (fine indents) as set forth in claims 17-21 since (1) Colombo et al teaches orienting the *center sipes* at an angle of 0-30 degrees with respect to the axial direction (60-90 degrees with respect to the circumferential direction) and orienting the *shoulder sipes* at an angle of 0-45 degrees with respect to the axial direction (45-90 degrees with respect to the circumferential direction) and (2) German 156 suggests orienting center fine cuts (center sipes / fine indents) at an angle of 55 to 85 degrees (angle delta of 95-125 degrees) and orienting shoulder finer cuts (shoulder sipes / fine indents) at an angle corresponding to 75-85 degrees - the illustrated angle for the shoulder sipes being 80 degrees and the illustrated angle for the center sipes being 85 degrees.

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**20) Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Colombo et al and optionally in view of Graas et al as applied above and further in view of Europe 577.**

As to claim 13, it would have been obvious to one of ordinary skill in the art to provide the shoulder sipes (fine indents) with a narrower width than the width of the center sipes (center fine indents) since Europe 577, also directed to a winter tire, suggests providing incisions (sipes / fine indents) in shoulder regions with a smaller width than the incisions (sipes / fine indents) in the central region to reduce softening in the shoulder regions and thereby equalize wear and improve ground adhesion.

Remarks

21) The remaining references are of interest.

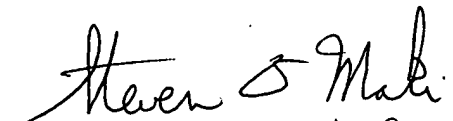
22) No claim is allowed.

23) Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven D. Maki whose telephone number is (571) 272-1221. The examiner can normally be reached on Mon. - Fri. 8:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Dunn can be reached on (571) 272-1171. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Steven D. Maki  
October 29, 2005

  
**STEVEN D. MAKI** 10-29-05  
**PRIMARY EXAMINER**